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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,989	01/10/2005	Thomas Antkowiak	P01072US2A	5203

7590 06/21/2006

Chief Intellectual Property Counsel  
Bridgestone Americas Holding Inc  
1200 Firestone Parkway  
Akron, OH 44317-0001

EXAMINER
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TESKIN, FRED M

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/520,989

Applicant(s)

ANTKOWIAK ET AL.

Examiner

Fred M. Teskin

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,8,12,13 and 15 is/are rejected.
- 7) ☒ Claim(s) 4,7,9-11,14,16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>053105</u> . | 6) <input type="checkbox"/> Other: ____  |

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The preliminary amendment of January 10, 2005 having been entered, claims 1-17 are currently pending and under examination.

The disclosure is objected to because of the following informalities: the term "-4-methylpiperazine" is misspelled at page 5, line 16.

Appropriate correction is required.

Claims 5 and 12 are objected to because of the following informalities: the "or" connector should be relocated between the final two functional species, i.e., immediately before "-perhydroindole". Appropriate correction is required.

Claims 10 and 17 are objected to because of the following informalities: the term "ele[c]trophile" is misspelled (see the final line of each claim). Appropriate correction is required.

Claims 5, 6, 8, 12, 13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, the following grounds for indefiniteness apply to the indicated claims.

(A) Claims 5 and 12 are indefinite as it is unclear whether the parenthetical expression "(or -perhydroazepine)" is intended to be synonymous with "-hexamethyleneimine" or further restrictive thereof. In the former case, the expression is

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mere surplusage to the claims and should be deleted. As the claims are now drafted, the presence of the expression creates uncertainty as to the scope of the claims.

(B) Claims 6 and 8 respectively recite the limitations "the cyclic-amino functionalized styryl compound" and "the cyclic amine compound". Each limitation lacks proper antecedent basis from claim 1. In this regard, note that claim 1 provides no precedent for "cyclic-amino" functionality or a "cyclic amine" compound.

(C) Claims 13 and 15 also recite the limitations "the cyclic-amino functionalized styryl compound" and "the cyclic amine compound", respectively, which limitations lack proper antecedent basis from claim 3.

(D) Claims 8 and 15 are incomplete, hence indefinite, due to omission of a bond line from the "cyclic" amine structure depicted in each claim. Cf., formula (III) as shown in original claim 8. Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of Morrison et al, Strecker and Vitus et al.

The references each disclose an anionic polymerization initiator prepared by reacting a specific organolithium compound (sec-butyllithium) with divinylbenzene under

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reaction conditions so as to form an adduct, and polymer preparation using the adduct so formed. See Morrison et al, Examples 1 (col. 6, ll. 45+) and 11; Strecker, Example 1 (col. 4, ll. 50+); and Vitus et al, Examples 1 (col. 6, line 34 to col. 7, line 5) and 7.

Claims 1 and 3 broadly call for preparing the initiator by combining a "functionalized styryl compound" and an "organolithium compound". Examiner considers the divinylbenzene used in preparing the prior art initiators to qualify as a *vinyl-functionalized styryl compound*, in that the vinyl groups participate in the addition reaction as detailed at, for example, column 4, lines 55-65 of Morrison et al.

As such, the cited art is seen to describe the recited process of "combining a functionalized styryl compound and an organolithium compound" to prepare an initiator, and the recited step of polymerizing monomer therewith. Accordingly, claims 1 and 3 are deemed to lack novelty.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Trepka et al is pertinent to the preparation of polymerization initiators by reacting a halo- or thio-phenol with an alkylolithium compound.

Claim 2 is allowable on the present record. An anionic polymerization initiator defined as per the formula (I) is not taught nor fairly suggested in the available prior art.

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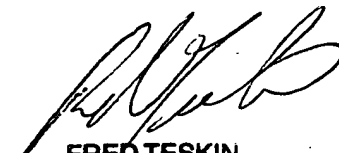
Claims 4, 7, 9, 11, 14 and 16 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/06-15-06



FRED TESKIN  
PRIMARY EXAMINER  
1703